# Latent TGF beta 1/TGFB1 Protein, Rat (HEK293, His)

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| **Cat. No.:** | HY-P73615 |
| **Synonyms:** | Transforming growth factor beta-1 proprotein; LAP; TGF-beta-1; TGFB1 |
| **Species:** | Rat |
| **Source:** | HEK293 |
| **Accession:** | P17246 (L30-S390) |
| **Gene ID:** | 59086 |
| **Molecular Weight:** | Approximately 55&38&16 kDa |

## PROPERTIES

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| **AA Sequence** | L S T C K T I D M E L V K R K R I E A I R G Q I L S K L R L A S P P S Q G E V P P G P L P E A V L A L Y N S T R D R V A G E S A D P E P E P E A D Y Y A K E V T R V L M V D R N N A I Y D K T K D I T H S I Y M F F N T S D I R E A V P E P P L L S R A E L R L Q R F K S T V E Q H V E L Y Q K Y S N N S W R Y L G N R L L T P T D T P E W L S F D V T G V V R Q W L N Q G D G I Q G F R F S A H C S C D S K D N V L H V E I N G I S P K R R G D L G T I H D M N R P F L L L M A T P L E R A Q H L H S S R H R R A L D T N Y C F S S T E K N C C V R Q L Y I D F R K D L G W K W I H E P K G Y H A N F C L G P C P Y I W S L D T Q Y S K V L A L Y N Q H N P G A S A S P C C V P Q A L E P L P I V Y Y V G R K P K V E Q L S N M I V R S C K C S |
| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. |
| **Storage & Stability** | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| **Shipping** | Room temperature in continental US; may vary elsewhere. |

## DESCRIPTION

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| **Background** | TGF-B1 is known to be secreted in the inactive, latent form. And latent TGF beta 1 (latent TGFB1) is comprised of three distinct components: mature TGFB1 which is a disulphide-bonded dimer, the N-terminal remnant of theTGFB1 precursor |

and a novel type of protein denoted the latent TGFB1-binding protein (LTBP)[2].
Although latent TGF beta 1 is converted into its biologically active form by various mechanisms, but all mechanisms involve dissociation of TGFB1 from LAP-B1 in the soluble SLC (small latent complex) and/or the ECM bound LLC (large latent complex). In addition, Proteolytic cleavage is the most prominent cellular mechanism of latent TGFB1 activation. Latent TGF beta 1 associates with the extracellular matrix (ECM) via LTBP. LTBPs are components of the ECM, so that the proteolytic cleavage of LTBP can lead to the release of latent TGF-beta 1 from the matrix. Besides, the proteolytic cleavage of LLC and liberation of active TGFB1 is performed by BMP-1, by a variety of matrix metalloproteinases (MMPs)[1][3].

**Caution: Product has not been fully validated for medical applications. For research use only.**

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